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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,818	11/29/2001	Eiji Furukawa	122.1476	9741

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

LAVIN, CHRISTOPHER L

ART UNIT	PAPER NUMBER
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2624

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/995,818

Applicant(s)

FURUKAWA ET AL.

Examiner

Christopher L. Lavin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 - 9, 11, 12, and 14 - 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 - 9, 11, 12, and 14 - 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 04/02/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the RCE filed on 2/21/07.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner maintains his previous rejection with regards to claim 14. The judging and drawing means make little or no sense as currently written. The examiner encourages the applicant to use clear language such as the language presented in the remarks (01/30/07) to overcome this 112. Until then the examiner will maintain his previous interpretation of the claim.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2 – 6, 15, 16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki (6,321,370). Please note that Suzuki is the US version of PCT Pub WO9812655, which was published in Japanese on March 26, 1998. The PCT Pub

would be a 102(b) reference; however, the examiner does not see the need to get the PCT Pub translated at the current time.

In regards to claim 5, Suzuki discloses A logic drawing entry apparatus for processing a plurality of drawing sheets for computer aided design of logic circuits, each of said plurality of drawing sheets indicating a logic circuit having at least one symbol, comprising: means for creating an inter-drawing diagram file which describes respective positions of said plurality of drawing sheets on one screen and attributes of said plurality of drawing sheets (col. 3, lines 10 – 18; col. 3, lines 56 – 60); inter-drawing indication means for indicating, on said screen, said plurality of drawing sheets according to the description in said inter-drawing diagram file by miniaturizing the size of each of said plurality of drawing sheets (Figures 5 – 9; col. 4, lines 39 – 54); inter-drawing connection counting means for counting the number of connections between any combination of said two of said plurality of drawing sheets, wherein a connection describes the relationship between two symbols on the two of said plurality of drawing sheets (Figure 3; col. 3, lines 10 – 18); and net connection relation drawing means for drawing nets among said plurality of drawing sheets miniaturized and indicated on said screen, an indication of said nets being modified (Figures 8 and 9; col. 5, lines 12 – 46).

In regards to claim 2, The logic drawing entry apparatus of claim 1 further comprising an inter-drawing connection diagram editing means for implementing editing on each of a plurality of said drawings when a plurality of said drawings are indicated on one screen (col. 4, lines 25 – 38: The user can move the inter-drawing diagrams around and the connections are connected by the system.).

In regards to claim 3, The logic drawing entry apparatus of claim 2, wherein said inter-drawing connection diagram editing means has a function of modifying the position of each drawing on an indication screen (col. 4, lines 25 – 38).

In regards to claim 4, The logic drawing entry apparatus of claim 2, wherein said inter-drawing connection diagram editing means has a function of modifying the color of each drawing on an indication screen (col. 4, line 55 – col. 5, line 4).

In regards to claim 6, The logic drawing entry apparatus of claim 5, wherein said indication of said nets is viewed as a single line, and a thickness of the line varies in proportion to said number of connections counted by said inter-drawing connection counting means (col. 5, lines 11 – 46).

In regards to claim 15, The logic drawing entry apparatus of claim 5, wherein said plurality of miniaturized sheets are drawn in a shape of a block diagram (Figure 9).

In regards to claim 16, claim 16 is rejected for the same reasons as claim 6. The argument analogous to that presented above for claim 6 is applicable to claim 16.

In regards to claim 17, claim 17 is rejected for the same reasons as claim 6. The argument analogous to that presented above for claim 6 is applicable to claim 17.

In regards to claim 18, The logic drawing entry apparatus of claim 6, wherein the inter-drawing indication means indicates said plurality of drawing sheets only by means of drawing frames thereof (Figure 9).

4. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Otaguro (6,966,045).

Otaguro teaches (figure 15) that a high level of abstraction (r1 and r2) can be displayed as the components (c11, c12, c13, c21, c22, c23, and c24) that make up these symbols. Otaguro also clearly discloses the concept of a net drawing means in figure 16, item 27.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Suzuki and Merchant (6,490,712).

In regards to claim 7, Suzuki discloses displaying the drawing sheets names, but does not teach of modifying the names. However, Merchant teaches a method of setting names as shown in figure 1B, label: Logical Name and a sorting step at Figure 3A, step 330.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Suzuki's teaching with Merchants teaching of Figure 3A, step 330, because Merchant's approach makes finding names easier.

In regards to claim 8, the combination teaches the logic entry apparatus of claim 7, wherein said drawing name modifying means, further, designates intervals (since fig. 3A uses alphanumeric sort via numbers) between the names of said plurality of drawing sheets.

9. Claims 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Suzuki and Dahl (6,557,153).

In regards to claim 9, A logic drawing entry apparatus for processing a drawing sheet indicating a logic circuit which has a plurality of symbols and nets connecting among said symbols, logic drawing entry apparatus comprising: Symbol selecting means for selecting a symbol via a user to be moved and a position to which the selected symbol moves (Figures 8 and 9; col. 4, lines 25 – 38); Judging means for

judging whether or not a symbol exists at said position selected (Suzuki must in some fashion deal with this requirement as two overlapping components could not be manufactured.); Symbol moving means for moving said selected symbols to said position if there is no symbol at said selected position (Figure 9); [Symbol swapping means for swapping said selected symbol for a symbol at said selected position if there is a symbol at said selected position, so that positions of said selected symbol and said symbol at said selected position are swapped each other]; and Net redrawing means for redrawing nets for said selected symbols after the movement or swap while keeping the connection relations between said selected symbols before the movement (Figure 9).

As shown above Suzuki discloses all of the requirements of claim 9, except for the swap step. Suzuki clearly allows a user to move the logic blocks around, but never addresses the concept of swapping. Dahl teaches (col. 10, lines 1 – 12) that a user should be allowed the option of swapping two logic blocks.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for logic block swapping as taught by Dahl in the apparatus taught by Suzuki. Dahl teaches that swapping allows the user to make the optimum use of the area.

In regards to claim 11, The logic drawing entry apparatus of claim 9, further comprising an arranging means for arranging a plurality of selected symbols to form a column or a row (Figure 9, Suzuki clearly allows the user to place the symbols in whatever fashion he or she wishes.).

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In regards to claim 12, The logic drawing entry apparatus of claim 11, wherein said arranging means has a function of designating intervals between symbols (Figure 9).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. US Pat. 5,850,349 discloses the concept of varying the thickness of a displayed net based on the total number of lines going between two components.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Lavin whose telephone number is 571-272-7392. The examiner can normally be reached on M - F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher Lavin



BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600